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NASA Contractor Report 3922(35)

USSR Space Life Sciences Digest

Index to Issues 26–29

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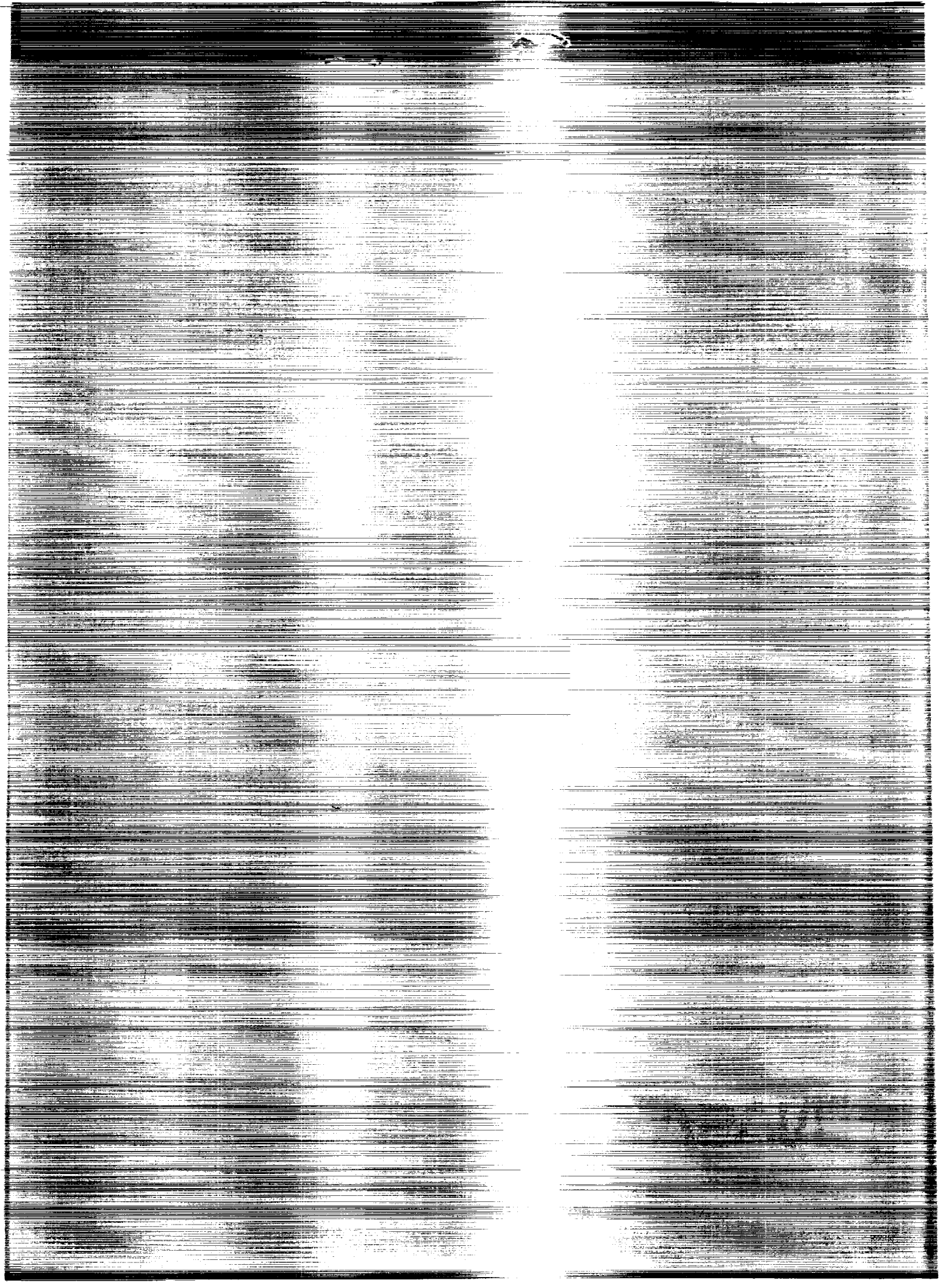

NASA Contractor Report 3922(35)

USSR Space Life Sciences Digest

Index to Issues 26–29

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HOW TO USE THIS DOCUMENT

The first section of this document provides bibliographic citations and key words for all abstracts published in Issues 26-29 of the USSR Space Life Sciences Digest. Citations are grouped according to the topic area categories under which the corresponding abstracts were originally included and listed within categories according to issue number. Issue numbers are provided as headings and, in addition, the first number in parentheses after abstract number refers to the appropriate Digest issue. As always, topic areas are presented in alphabetical order.

The second section of this document, starting on page 75, is a key word index. Numbers following each entry in the index refer to page number of the present document. Within the key word list, topic area names are printed in bold face, as are the page numbers for the primary topic area listing. Page numbers not in bold following topic area names refer the reader to relevant abstract originally included under other topic areas.

ADAPTATION

ISSUE 27

MONOGRAPH:

M160(27/90) Vinogradov VV.
Gormony, Adaptatsiya i Sistemnyye Reaktsii Organizma; Гормоны, Адаптация и Системные Реакции Организма; [***Hormones, Adaptation, and Systemic Reactions.***]
Minsk: Nauka i Tekhnika; 1989.
[223 pages; 19 Tables; 56 Figures; 538 references]
Affiliation (book): Institute of Biochemistry; Belorussian Academy of Sciences

KEY WORDS: Adaptation; Endocrinology, Hormones, Stress; Biological Rhythms, Seasonal Rhythms; Metabolism; Cardiovascular and Respiratory System

ISSUE 28

PAPERS:

P1239(28/90)* Ivnitskiy YuYu, Moiseyev NYa,.
Tolerance of mice to various types of hypoxia and X-ray irradiation after exposure to hypoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 32-33.
[21 references; 10 in English]

Tolerance, Hypoxia; Radiobiology, X-rays
Mice
Adaptation, Hypoxia

P1281(28/90)** Shatemirova KK, Zelenshchikova VA, Min'ko YuV.
Catalytic properties of monoamine oxidase in adaptation to barochamber hypoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2): 54-56.
(15 references; 5 in English)

Enzymology, Monoamine Oxidase, Mitochondrial Membrane
Rats
Adaptation, Hypoxia

CONFERENCE REVIEW:

CR14(28/90)* Gippenreyter YeB.
Report on: ***International Conferences On Mountain (High Altitude) Medicine,*** Prague, Czechoslovakia, October 19-23, 1988.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 57-59.

Key Words: Adaptation, High Altitude, Hypoxia, Personnel Selection, Human Performance

ISSUE 29:

PAPER:

P1328(29/90)** Balandina TN, Nikitin YeI, Kovalenko YeA, Savina VP.
Biochemical aspects of human adaptation to the combined effects of head-down tilt, decreased barometric pressure and increased level of O_2.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(4): 56-57; 1990.
[5 references; 1 in English]

Biochemistry, Metabolism, Lipid Peroxidation; Hematology, Erythrocytes
Humans, Males
Adaptation, Head-Down Tilt, Low Barometric Pressure, Hyperoxia, Exercise

BOOK REVIEW:

BR18(29/90) A.A. Azhayev.
Review of G.N. Novozhilov, O.P. Lomov. ***Hygienic Evaluation of Microclimate.***
Leningrad: Meditsina: 1987; 112 pages.
In: Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3): 63; 1990.

KEY WORDS: Adaptation, Microclimate, Heat, Human Performance, Industrial Hygiene, Countermeasures, Endocrinology, Metabolism, Mineral Metabolism

ISSUE 27

PAPER:

P1230(27/90) Mel'nik SG, Shakula AV, Gladkikh FD.
The effect of workload on the functional state of flight crews of ship-based aviation.
Voyenno-Meditsinksiy Zhurnal.
1989(7): 54-57.
[No references]
Authors' Affiliations: USSR Medical Corps

Aviation Medicine, Functional State, Cardiovascular and Respiratory Systems
Humans, Air Crews, Ship-Based Aviation
Human Performance, Workload

BOOK REVIEW:

BR17(27/90)*Gyurdzhian AA.
Review of: Ernsting J, and King , et al. (Editors).
Aviation Medicine.
London: Butterworth 1988, 738 pages.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 92-94; 1989.

KEY WORDS: Aviation Medicine, Human Performance, Aviation Psychology, Biodynamics, Thermal Stress; Biological Rhythms

ISSUE 28

PAPERS:

P1252(28/90)* Vlasov VV, Kopanev VI.
The effects of working in aviation on health status (epidemiological data).
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 4-9.
[56 references; 43 in English]

Aviation Medicine, Health Status
Humans, Aviation Personnel
Aviation Professions

P1271(28/90)**Demirchoglan GG, Konakhevich YuG, Petlyuk VKh, Peshkov RV, Khlomenok PN, Sholpo LN, Brazhnik VI.
Experimental evaluation of the displacement of center of mass of the body in a man-chair system when the head is nodded.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2): 24-25; 1990.
[1 references; none in English]

Biomechanics, Displacement of Center of Mass, Head Nodding
Humans
Aviation Medicine, Ejection Sear

P1270(28/90)** Nikolayevskiy YeYe.
Diurnal rhythm of lipids, carbohydrates, and certain hormones in blood plasma in healthy pilots.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2): 21-23; 1990.
[22 references; 6 in English]

Metabolism, Lipids, Carbohydrates; Endocrinology
Aviation Medicine, Humans, Pilots
Biological Rhythms, Diurnal Rhythms

ISSUE 29:

PAPER:

P1294(29/90)* Ponomarenko VA.
The category of health as a theoretical problem in aerospace medicine.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3):17-23; 1990.
[15 references; none in English]

Aviation Medicine, Human Performance, Health, Prophylaxis
Humans, Flight Personnel; Research Program, Equipment and Instrumentation, Computer Systems
Extreme Factors, Countermeasures, Neurophysiology, Neurotransmitters, Nutrition, Drugs, Non-Traditional Medicine, Immunology, Psychology, Stress, Stress Protectors, Metabolism, Endocrinology

ISSUE 26

PAPERS:

P1193(26/90) Alyakrinskiy BS.
The problem of desynchronosis in space flight.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5):4-8; 1989.
[33 references; 5 in English]

Biological Rhythms, Desynchronosis; Circadian Rhythms, Work Schedules
Humans, Cosmonauts, Animals
Space Flight; Adaptation Syndrome

P1187(26/89) Alpatov AM.
A raster-method for analyzing the periodic structure of biological rhythms.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5):83-85; 1989.
[4 references; 1 in English]

Biological Rhythms, Periodic Structure
Theoretical Article
Mathematical Modeling, Raster Method

MONOGRAPH:

M158(26/90) Gazenko OG, Editor.
Bioritmologicheskiye issledovaniya v kosmicheskoy biologii i meditsine
Биоритмологические исследования в космической биологии и медицине
[Biological Rhythms In Space Biology and Medicine;]
Volume 64 In series: Problemy Kosmicheskoy Biologii,
Leningrad: Nauka; 1989.
[197 pages]

KEY WORDS: Biological Rhythms; Adaptation, Space Flight, Metabolism, Fat, Carbohydrates; Stress; Cardiovascular and Respiratory Systems; Human Performance, Shift Work, Endocrinology, Thyroid

ISSUE 27

PAPER:

P1204(27/90)* Alpatov Am, Yevstratov YuA., Chernyshev VB, Lebedev MI, Zotov VA.
Free running circadian rhythms in the darkling beetle after space flight.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 31-33; 1989.
[9 references; 5 in English]

Biological Rhythms, Circadian Rhythms, Free-Running, Motor Activity
Beetles, Darkling
Space Flight, COSMOS-1887

ISSUE 29:

PAPER:

P1330(29/90)** Komarov FI, Chirkova EN, Suslov LS, Klionskaya AG, Bobina LV, Makarova TB.
Association of annual biological rhythms in red blood counts in healthy individuals and annual rhythms of changes in solar activity.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(4): 60-62; 1990.
[11 references; none in English]

Biological Rhythms, Hematology, Red Blood Counts
Humans, Males and Females

BIOSPHERICS

ISSUE 27

MONOGRAPH:

M161(27/9) Khantseverov FR, Ostroukhov VV.
Modelirovaniye Kosmicheskikh Sistem Izucheniya Prirodnykh Resursov Zemli; Моделирование Космических Систем Изучения Природных Ресурсов Земли; [***Modeling of Space Systems for Studying the Earth's Natural Resources***]
Moscow: Mashinostroyenie; 1989.
[264 pages; 69 Figures]

KEY WORDS: Biospherics, Mathematical Modeling, Space Systems, Remote Sensing, Natural Resources

BODY FLUIDS

ISSUE 26

PAPER:

P1180(26/90) *Lobachik VI, Zhidkov VV, Abrosimov SV.
Body fluid status during a 120-day period of hypokinesia with head-down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 57-61; 1989.
[6 references; none in English]

Body Fluids, Hydration, Extracellular Fluid; Metabolism, Mineral, Fats
Humans
Hypokinesia With Head-Down Tilt, Long-Term; Pharmacological Countermeasures, Physical Exercise, Ultraviolet Therapy

ISSUE 29:

PAPERS:

P1338(29/90) Zavadovskiy AF, Korotayev MM, Vavakin YuN.
Increasing human resistance to headward fluid redistribution.
In: Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
Tezisy Dokladov IX Vsesoyuznoy Konferentsii. Космическая Биология и Авиакосмическая Медицина.Тезисы Докладов IX Всесоюзной Конференции. [Space Biology and Aerospace Medicine: IXth All-Union Conference]
Kaluga: 19-21 June 1990.
Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Page 63.

Body Fluids, Headward Fluid Shifts, Cardiovascular and Respiratory Systems, Cerebral Hemodynamics
Humans, Age Differences, Patients, Atherosclerosis
Countermeasures, Head-Down Tilt, Repeated Exposure

P1331(29/90) Abashev VYu, Andriyako LYa, Bubeyev YuA, Degtyarev VA, Remisov YuV.
A technique for individual assessment of the level of redistribution of blood in humans during the acute period of adaptation to weightlessness.
In: Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
Tezisy Dokladov IX Vsesoyuznoy Konferentsii. Космическая Биология и Авиакосмическая Медицина.Тезисы Докладов IX Всесоюзной Конференции. [Space Biology and Aerospace Medicine: IXth All-Union Conference]
Kaluga: 19-21 June 1990.
Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Pages 5-6.

Body Fluids, Fluid Redistribution, Cardiovascular and Respiratory Systems
Humans, Males
Assessment Technique,Tilt Test, Composite Index

BOTANY

ISSUE 27

PAPER:

P1213(27/90)* Nevzgodina LV, Maksimova YeN, Kaminskaya YeV.
The effects of single hits by heavy ions of galactic cosmic radiation on Lactuca sativa seeds flown on board Salyut-6 and Salyut-7 space stations.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 66-70; 1989.
[15 references; 6 in English]

Genetics, Aberrations
Botany, Lettuce, Seeds
Space Flight, Long-term, Salyut-6, Salyut-7; Radiobiology, Heavy Ions

ISSUE 28

PAPERS:

P1235 (28/90)* Anikeyeva ID.
Genetic studies of Arabidopsis seeds on space flights.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 22-25.
[14 references; 4 in English]

Genetics, Damage, Mutations, Accelerated Aging
Botany, *Arabidopsis*, Seeds
Space Flight, Short-Term, Long-Term; Zond-8, Soyuz, COSMOS, Salyut; Radiobiology, Cosmic Radiation

P1236(28/90)*Nevzgodina LV, Maksimova YeN, Akatov YuA, Kaminskaya YeV, Marennyy AM.
The effect of the vacuum of space on seeds of lettuce (Lactuca sativa) exposed on COSMOS series biosatellites.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 25-28.
[10 references; 4 in English]

Genetics, Cytogenetic Effects
Botany, Lettuce Seeds
Space Flight, COSMOS-1129, -1514, -1760; Radiobiology, Cosmic Radiation, Solar Radiation

P1253(28/90) Abramova VM, Vasil'yeva NG, Verigo VV, Marennyy AM, Portman AI.
Study of the biological effects of heavy charged particles of cosmic radiation on a population of higher plants -- Wolffia arrhiza.
In I Vsesoyuznyy Radiobiologicheskiy S"yezd; И Всесоюзный Радиобиологический Съезд (I All-Union Radiobiology Congress) Moscow 21-27 August, 1989. Paper Abstracts. Volume III
Pushchino: USSR Academy of Sciences; 1989.
Pages 562-563.
Authors' affiliation Institute of Biomedical Problems, USSR Ministry of Health.

Botany, Biological Effects
Wolffia arrhiza, Duckweed
Radiobiology, HZE Particles

BOTANY

P1249(28/98)* Rumyantseva VB, Merzlyak MN, Mashinskiy AL, Nechitaylo GS.
The effects of space flight factors on the pigment and lipid components of wheat plants.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 53-55.
[15 references; 7 in English]

Botany, Pigment, Lipid Components
Wheat
Space Flight, Mir

MONOGRAPH:

M162(28/90) Grodzinskiy DM
Radiobiologiya Rasteniy, Радиобиология Растений [***Radiobiology of Plants***].
Kiev: Naukova Dumka; 1989.
[384 pages; 85 Figures; 7 Tables; 800 references]
Affiliation: N.G. Kholodnyy Botanical Institute, Ukrainian Academy of Sciences.

KEY WORDS: Botany, Radiobiology, Ionizing Radiation, Genetics, Mutagenesis, Cell Death

ISSUE 29:

PAPER:

P1292(29/90) Laurinavichyus RS, Kenstavichene PF.
The significance of the force of gravity in formation and growth of callus tissue in Arabidopsis.
In: M164(29/90) Flom TV (editor)
Trudy XXIII Chteniy Posvyashchennykh Razrabotke Nauchnogo Naslediya i Razvitiyu Idey K.E. Tsiolkovskogo: Sektsiya "Problemy Kosmicheskoy Meditsiny i Biologii" Mediko-Biologicheskiye Problemy Obespecheniya Kosmicheskikh Poletov v Svete Idey K.E. Tsiolkosvskogo
Труды XXIII Чтений Посвященных Разработке Научного Наследия и Развитию Идей К.Э. Циолковского: Секция «Проблемы Космической Медицины и Биологии» Медико-Биологические Проблемы Обеспечения Космических Полетов в Свете Идеы К.Э. Циолкосвского
Proceedings of the XXIII Lecture Series Devoted to Developing the Scientific Ideas of K.E.Tsiolkovskiy: Section on "Problems of Space Medicine and Biology. Biomedical Problems in the Support of Space Flight in Light of the Ideas of K.E. Tsiolkovskiy.
Kaluga 13-16, September 1988.
USSR Academy of Sciences: 1989: 98 pages.
Affiliation: Commission on Development of the Scientific Heritage of K.E. Tsiolkovskiy, USSR Academy of Sciences; K.E. Tsiolkovskiy State Museum on the History of Cosmonautics
Pages 65-70.
[6 references; 3 in English]

Morphology, Cytology, Plant Tissue Culture, Callus Tissue, Dedifferentiation, Developmental Biology
Botany, *Arabidopsis*
Space Flight, Salyut-7, Weightlessness Simulation, Horizontal Clinostatting

ISSUE 26

PAPERS:

P1179(26/90)* Mikhailov VM, Machinskiy GV, Buzulina VP, Geogriyevskiy VS, Nechayeva EN, Kryutchenko SG.
Tolerance for provocative tests under conditions of a 1-year exposure to hypokinesia with head-down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 54-56; 1989.
[7 references; none in English]

Cardiovascular and Respiratory Systems, Orthostatic Intolerance, Aerobic Capacity
Humans, Males
Hypokinesia with Head-down Tilt, Prophylactic Countermeasures, Physical Exercise, Drugs, Anti-g Suit; Provocative Tests, Tilt, Exercise Loading

P1181(260)* Yevdokimova AG, Radzevich AE, Solovyeva FB, Vinokhodova TV, Mamayev VI, Belyayev SM, Ovchinnikova LK.
A study of orthostatic tolerance and status of central and peripheral hemodynamics in hypertensive subjects undergoing a 7-day period of "dry" immersion.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 62-65; 1989.
[9 references; 2 in English]

Cardiovascular and Respiratory Systems, Hemodynamics, Central and Peripheral, Orthostatic Tolerance
Humans, Males, Patients, Hypertension
Immersion, Dry; Tilt Test

P1182(26/90)* Varosyan MA.
Functional and metabolic changes in the heart during adaptation to high-altitude hypoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 68-70; 1989.
[11 references; 3 in English]

Cardiovascular and Respiratory Systems, Cardiac Hypertrophy, Metabolism, Heart, Nucleic Acids
Rabbits
Adaptation, High Altitude Hypoxia

P1186(26/90) Kuznetsov VI.
Cardiac contractility in rats after chronic stress and thyroid.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 78-82; 1989.
[33 references; 8 in English]

Cardiovascular and Respiratory Systems, Cardiac Contractility
Rats, Female
Stress, Immobilization, Coarctation; Endocrinology, Thyroid Hormones

P1190(26/90) Tikunov BA, Kayfadzhyan MA, Oganesyan SS.
Ca^{2+} reactivity of ventricular actomyosin in rats exposed to gravitational loading.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 88-89; 1989.
[8 references; 3 in English]

Cardiovascular and Respiratory Systems, Ca^{2+} Reactivity, Ventricular Actomyosin
Rats, Male
Hypergravity, Acceleration

ISSUE 27

PAPERS:

P1202(27/90)* Turchaninova VF, Yegorov AD, Domracheva MV.
Central and regional hemodynamics on long-term space flights.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 19-26; 1989.
[20 references; 6 in English]

Cardiovascular and Respiratory Systems, Hemodynamics, Central, Regional
Humans, Cosmonauts
Space Flight, Long-term, Salyut-6, Salyut-7, Exercise

P1208(27/90)* Kuznetsov VI.
Cardiac contractility of guinea pigs exposed to long-term continuous stress.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 42-47; 1989.
[18 references; 3 in English]

Cardiovascular and Respiratory Systems, Cardiac Contractility
Guinea Pigs
Psychology, Stress

P1226(27/90) Beketov AI, Konyayeva YeI.
Circulation and oxygen pressure in the brains of alert and anesthetized rabbits in a head-down tilt position.
Fiziologicheskiy Zhurnal SSSR im I.M. Sechenova
75(11): 1548-1553.
Authors' affiliations: Medical Institute of Crimea, Simferopol; Sechenov Institute of Evolutionary Physiology and Biochemistry, Leningrad

Cardiovascular and Respiratory Systems, Circulation, Oxygen Pressure, Brain
Rabbits, Alert, Anesthetized
Head-Down Tilt

ISSUE 28

PAPERS:

P1231(28/90)* Gazenko OG, Shulzhenko YeV, Grigor'yev AI, Atkov OYu, Yegorov AD.
Medical investigations during an 8-month flight on Salyut-7-Soyuz-T.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 9-14.
[16 references; 7 in English]

Cardiovascular and Respiratory Systems, Neurophysiology, Vestibular System, Perception, Sensory Systems, Body Fluids, Endocrinology, Metabolism, Nutrition
Humans, Cosmonauts
Space Flight, Long-Term, Salyut-7, Prophylactic Countermeasures, EVA

P1232(28/90)*Kazakova RT, Katuntsev VP.
State of intracardiac and systemic hemodynamics in healthy humans exposed to a weightlessness simulation.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 15-17;1989.
[14 references; 4 in English]

Cardiovascular and Respiratory Systems, Hemodynamics, Intracardiac and Systemic
Humans, Males
Weightlessness Simulations, Immersion, Hypokinesia with Head-Down Tilt

P1233(28/90)* Buzulina VP, Popova IA, Vetrova YeG, Nosova YeA.
Interaction of cardiorespiratory and metabolic responses of humans to graded exercise.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 17-20;1989.
[16 references; 8 in English]

Cardiovascular and Respiratory Systems, Metabolism
Humans, Males
Physical Exercise, Graded, Horizontal

P1238(28/90)* Chernysheva ON.
Lipids in the cell membrane of the heart in rats after multiple exposure to an alternating magnetic field with frequency of 50 Hz.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1):30-31; 1990.
[12 references; 2 in English]

Cardiovascular and Respiratory Systems, Cell Membrane of the Heart
Rats
Radiobiology, Magnetic Field, Alternating

P1243(28/90)* Ivanov SG, Markova LI.
The use of the method of "dry" immersion in treatment of hypertensive crisis.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 40-42; 1990.
[16 references; 1 in English]

Cardiovascular and Respiratory Systems, Hypertensive Crisis
Humans, Patients, Essential Hypertension, Males and Females
Dry Immersion, Treatment

P1243(28/90)* Turbasov VD, Artamonova NP, Nechayeva YeI.
Assessment of bioelectric activity of the heart during head-down tilt using traditional and modified EKG leads.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1):42-44; 1990.
[12 references; 3 in English]

Cardiovascular and Respiratory Systems, Bioelectric Activity of the Heart
Humans, Males, Patients, Atherosclerosis
Hypokinesia with Head-Down Tilt, Countermeasures, Exercise, Muscle Stimulation, Drugs, Equipment and Instrumentation, EKG Leads

P1245(28/90)* Korolev AB.
Methods for measuring intracranial blood and cerebrospinal fluid circulation in chronic experiments involving induction of decompression sickness.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1):47-49; 1990.
[2 references; 1 in English]

Cardiovascular and Respiratory Systems, Circulation, Blood, Neurophysiology, Brain, Cerebrospinal Fluid
Rabbits
Decompression Sickness

P1278(28/90)** Nekhayev AS, Andriyenko YuI.
Criteria of endurance of a hypercapnic-hypoxic test
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2): 46-48; 1990.
[3 references; none in English]

Cardiovascular and Respiratory Systems, Endurance Criteria
Humans, Men, Individual Differences
Hyperoxia, Hypercapnia

P1279(28/90)** Savina VP, Ryzhkova VYe, Nikitin Yel, Balandina TN, Bragin LKh, Sivuk AK, Bychkov VP, Bobrova GG.
The composition of exhaled air, gas and energy exchange and biochemical parameters in blood and urine of humans under conditions of long-term exposure to hypercapnia and hypoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2):49-51; 1990.
[11 references; none in English]

Cardiovascular and Respiratory Systems, Exhaled Gas, External Respiration, Biochemical Parameters, Metabolism, Lipid Peroxidation, Nitrogen Metabolism
Humans, Males, Older Subjects
Hypercapnia, Hypoxia, Pressurized Environment, Long-Term

ISSUE 29:

PAPERS:

P1296(29/90)*Meyerson FZ.
The phenomenon of adaptive stabilization of the structures and protection of the heart.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3): 28-35; 1990.
[57 references; 31 in English]

Cardiovascular and Respiratory Systems, Cardiac Structures, Protection
Rats, Isolated Hearts
Adaptation, Preadaptation, Stress, Immobilization, Ischemia, Reperfusion, Endocrinology, Adrenergic System, Calcium

P1297(29/90)* Fedorov BM, Sebekina TV, Sinitsyna TM, Streltsova YeN, Vakulenko VM, Nikolayeva TG.
Stress and circulation in humans.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3): 35-40; 1990.
[36 references; 16 in English]

Cardiovascular and Respiratory Systems,Hemodynamics, General, Cerebral
Humans, Males
Human Performance, Mental Work, Stress, Hypokinesia

P1307(29/90)* Beketov AI, Konyayeva Yel.
Characteristics of the effects of caffeine on circulation and oxygen tension in the brain of alert rabbits undergoing head-down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3): 64; 1990.

Cardiovascular and Respiratory Systems, Neurophysiology, Brain Circulation, Oxygen Circulation
Rabbits
Head-Down Tilt, Caffeine

P1323(29/90)** Suvorov PM, Doroshev VG, Ivanchikov AP, Sidorova KA.
Types of hemodynamics in flight crews and their significance for clinical and flight certification practice.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(4): 44-48; 1990.
[18 references; 1 in English]

Cardiovascular and Respiratory Systems, Hemodynamics, Typology
Humans, Flight Crews, Patients, Neurocirculatory Asthenia, Myocardial Dystrophy, Myocardial Sclerosis, Essential Hypertension, Age Effects
Aviation Medicine

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Cardiovascular and Respiratory Systems, Hemodynamic Parameters, Typology
Humans, Males, Cosmonauts
Space Flight, Repeated Flights

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Pages 31-32.

Cardiovascular and Respiratory Systems, Acceleration Tolerance, +Gx
Humans, Males
Hypokinesia With Head-Down Tilt, Long-Term, 370 Day, Countermeasures, Exercise

DEVELOPMENTAL BIOLOGY

ISSUE 28

SPECIAL FEATURE: ***The First Baby Born in Space: The Unique "Incubator-2" Experiment is a Success***

Translation of an article by I. Nekhamkin in Sovetskiy Soyuz: June 1990

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Page 323-25 .

Developmental Biology, Regeneration, Limbs, Lens
Amphibians, Tritons
Space Flight, COSMOS-1667, -1887, -2044

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The growth of oocytes of the Spanish triton in weightlessness.
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Page 329-31 .

Developmental Biology, Oocyte Growth, Genetics, Delayed Effects
Amphibians, Spanish Tritons
Space Flight, COSMOS-1887, -939

DIGESTIVE SYSTEM

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Endocrinology, Adrenal Glands, Morphology
Rats, Males
Space Flight, COSMOS-1667

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Rats
Adaptation, Hypoxia, High-Altitude

P1219(27/90)* Zagorskaya YeA.
Endocrine response to low frequency electromagnetic fields of continuous and intermittent generation.
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Endocrinology, Endocrine Response
Humans and Animals, Review Article
Radiobiology, Low-Frequency Electromagnetic Fields, Constant, Intermittent

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Primates, Hadryas Baboons, Female
Hypokinesia, Long-Term

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Endocrinology, Catecholamines, Thermal Protection
Humans
Immersion, Chilling, Pharmacological Countermeasures, Sidnocarb, Neurophysiology

P1282(28/90)** Zagorskaya YeA,. Rodina GP.
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Endocrinology, Adrenal Cortex, Thyroid, Testes
Rats
Radiobiology, Electormagnetic Field, Pulsed, Low Frequency; Immobilization Stress

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Hormonal regulators of calcium metabolism after space flights varying in duration.
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Endocrinology, Hormonal Regulators, Calcitonin, Gastrin, PTH. Metabolism, Calcium, Body Fluids, Fluid-Electrolyte Balance
Humans, Cosmonauts
Space Flights, Short and Long-Term

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Morphology of the thyroid gland and concentration of thyroid hormones in blood of rats in experiments on COSMOS-1667 and -1887 biosatellites.
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Rats
Space Flight, Short-Term, COSMOS-1667, -1887, Adaptation, Initial, Transitional

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Functional activity of the pituitary-thryoid system in response to a 370-day period of hypokinesia with head-down tilt.
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Humans, Males
Hypokinesia, Head-Down Tilt, Countermeasures, Exercise

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Endocrinology, Ultimobranchial Glands, Morphology
Amphibians, Tritons
Space Flight, COSMOS, Foton

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Enzymology, Oxidative Enzymes; Musculoskeletal System, Skeletal Muscles, Mitochondria
Rats
Hypokinesia, Long- and Short-term, Recovery Period

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Enzymology, Peptide Hydrolases, Blood Serum, Lungs, Proteolysis, Tissue Respiration
Rats, Males
Cardiovascular and Respiratory System, Hypoxia; Adaptation, Barochamber Training

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Authors' Affiliation: Central Scientific Research Laboratory, Rostov Medical Institute

Enzymology, Digestive Enzymes; Gastrointestinal System
Rats
Adaptation; Immobilization Stress; Pharmacological Countermeasures; Adrenoblockers

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PAPER:

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Enzymology, Oxidative Enzymes, Transaminase, Liver
Rats
Hypokinesia, Immobilization Cages

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Humans
Equipment and Instrumentation, Impedance Plethysmography, Base Points

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Equipment and Instrumentation, Automated Diagnosis and Prognosis, Avtosan-83, Kontrol, Vita, Ritm
Humans
Operational Medicine, Space Medicine, Preventive Medicine

EXOBIOLOGY

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Authors' Affiliation: A.N. Bakh Institute of Biochemistry, USSR Academy of Sciences

Exobiology, Abiogenesis, Thermal Polycondensation
Amino Acids
Lithosphere, Simulation, Volcanic Activity

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Authors' Affiliation: Institute of Cytology, USSR Academy of Sciences, Leningrad

Exobiology; Abiogenic Synthesis; Thermal
Nucleotides
Lunar Soil

GENETICS

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PAPERS:

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Cytogenetic consequences of treatment with hyperbaric oxygen.
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[29 references; 17 in English]

Genetics, Cytogenetic Mutations, Hematology, Lymphocytes
Humans, Patients
Hyperbaric Oxygenation

HABITABILITY AND ENVIRONMENT EFFECTS

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PAPER:

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Thermoregulatory Response
Humans, Males
Habitability and Environment Effects, Hypercapnia; Pressurized Environment

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PAPER:

P1280(28/90)**Berlin AA.
The functional status of the skin in humans inhabiting pressurized environments of limited size.
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Skin, Protective Function, Desquamation
Humans, Males, Females
Habitability and Environment Effects, Pressurized Environment, Personal Hygiene

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PAPERS:

P1293(29/90*)Gazenko OG, Grigor'yev AI, Meleshko GI, Shepelev YeYa.
Habitability and man-rated bioregenerative life support systems
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Habitability and Environment Effects, Biospherics, Ecological Specifications, Human Ecology
Theoretical Article, Humans
Life Support Systems, Bioregenerative, CELSS, Space Flights, Long-Term, Mars Mission

HABITABILITY AND ENVIRONMENT EFFECTS

MONOGRAPH:

M163(29/90) Beregovoy GT, Yarpolov VI, Baranetskiy II, Vysokanov VA, Shatrov YaT.
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KEY WORDS: Habitability and Environmental Effects, Space Flight, Safety, Radiobiology, Equipment and Instrumentation, Cosmonaut Selection, Cosmonaut Training, Human Performance, Contingency Situations, Survival

HEMATOLOGY

ISSUE 27

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Hematology, Nutrition, Blood Iron; Ferrocerone Test
Humans
Hypokinesia with Head-Down Tilt

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Hematology, Hemopoietic System
Mathematical Modeling
Radiobiology, Radiation Damage

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The stimulating effect of chronic irradiation with small dose rates on lymphopoiesis and granulcytopoiesis. (Results of mathematical modeling and experimental data).
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Authors' affiliation: Institute of Biomedical Problems, USSR Ministry of Health

Hematology, Granulocytopoiesis, Lymphocytopoiesis, Chalone Mechanism
Mathematical Modeling, Mammals, Rats
Irradiation, Chronic, Low Dose

HEMATOLOGY

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Hematology, Hemostasis
Dogs
Radiobiology, γ-Irradiation, High Altitudes

P1285(28/90)** Pak GD, Sverchkova VS, Danilevskaya TN.
The hemostasis system under conditions of various levels of hypoxic hypoxia.
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Hematology, Hemostasis
Literature Review
Hypoxia, Hypoxic

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PAPER:

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Hematology, Rheological Parameters, Cardiovascular and Respiratory Systems, Hemodynamics
Humans, Males
Hypokinesia, Head-Down Tilt

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Hematology, Rosette Formation, Macrophages, Histology
Rats, Males
Hypokinesia, Immobilization Cages

HEMATOLOGY

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Hematology, Blood Parameters, Immunology
Humans, Males
Hypokinesia, Head-Down Tilt, Long-Term, 370 Days

ISSUE 26

PAPER:

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Histology, Skin Basophils
Rats
Hypoxia

ISSUE 26

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Human Performance, Sensorimotor Performance; Neurophysiology, Proprioception
Humans, Operators
Hypokinesia with Head-down Tilt, Immersion

P1199(26/90) Bobko NA.
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Human Performance, Shift Work; Cognitive Task
Humans, Operators
Biological Rhythms, Diurnal Variations

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KEY WORDS: Human Performance; Humans; Operators; Equipment and Instrumentation; Research Apparatus; Research Methods; Psychology; Neurophysiology

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Human Performance, Evaluation, Emergency Response
Human, Operator
Monotony

P1269(28/90)**Ivanov VI, Ivanov VI.
Techniques and means for optimizing functional status of flight school cadets during preflight activity.
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Human Performance, Optimization, Functional Status
Humans, Flight School Cadets
Preflight Training, Exercise, Feedback

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The effect of relaxation on perceptual/motor performance of humans.
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Human Performance, Perception, Perceptual/Motor Performance
Humans
Autogenic Training, Relaxation

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PAPERS:

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The effect of various pharmacological agents on general state, heart rhythm , and performance efficiency of operators.
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Humans, Males, Operators
Mental Tasks, Pharmacological Agents

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Human Performance, Mental Tasks,
Humans, Males, Cosmonauts
Space Flight, Long-Term, Equipment and Instrumentation, Pleven-87

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Human Performance, Psychological Readiness
Humans, Males, Cosmonauts
Space Flight, Man-Machine Systems, Equipment and Instrumentation, Semi-Full-Scale Simulation, Cosmonaut Training, Mathematical Modeling

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PAPERS:

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Immunology, Immune Status
Humans, Males, Individual Differences
Adaptation, High Altitude Sickness

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Immunology, Resistance; Cardiovascular and Respiratory Systems; Exercise Tolerance
Humans, Men
Smoking, Habitability and Environment Effects; Pressurized Environment

P1220(27/90)* Ignatova OV, Berlin AA, Pak ZP, Popov IG.
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Immunology, Skin, Protective Function
Humans
Operational Medicine

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Authors' affiliation: Institute of Biomedical Problems, USSR Ministry of Health

Immunology, Humoral Immunity
Mathematical Modeling, Mammals
Radiobiology, Irradiation

ISSUE 29:

PAPER:

P1348(29/90) Lesnyak AT, Vorotnikova IYe, Rykova MP, Meshkov DO.
Proliferative, suppressor, and cytotoxic activity of splenocytes of rats in the experiment on COSMOS-2044.
In: Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Page 320-321.

Immunology, Splenocytes, Proliferation, Suppressor, Cytotoxic
Rats
Space Flight, COSMOS-2044, Tail Suspension

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PAPERS:

P1173(26/90)* Levinskikh MA, Sychev VN.
Growth and development of one-celled algae as a component of an "algobacterial cenosis - fish" ecosystem under space flight conditions
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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[12 references; 1 in English]

Life Support System, CELSS; Algobacterial Cenosis-Fish Ecosystem
Microbiology, Algae, *Chlorella*; Fish
Space Flight; COSMOS-1187

P1174(26/90)* Sychev VN, Levinskikh MA, Livanskaya OG.
Investigation of the growth and development of Chlorella exposed to space on COSMOS-1887.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 35-39; 1989.
[9 references; none in English]

Life Support System, CELSS
Microbiology, Algae, *Chlorella*
Space Flight, COSMOS-1887

P1175(26/90)* Drugova NA, Chernova LS, Mashinskiy AL.
The formation of a wheat microbial cenosis on a manned space flight.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 39-42; 1989.
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Life Support Systems, CELSS
Botany, Wheat, Microbiology
Space Flight, Manned

P1185(26/90)* Vasilenko II, Shevel' NM, Sinyak YuYe.
Matter balance during the catalytic oxidation of water mixtures by hydrogen peroxide.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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[11 references; 2 in English]

Life Support System, Water Regeneration, Catalytic Oxidation, Low Temperature
Hydrogen Peroxide
Matter Balance

ISSUE 28

PAPER:

P1242(28/90)* Kozyarin IP, Suk VG, Maslenko AA, Khil'ko OK.
Hygienic evaluation of oxygen produced by a system containing a solid polymer electrolyte.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina
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Evaluation, Oxygen
Rats, Humans
Life Support System, Solid Polymer Electrolyte

ISSUE 29:

PAPERS:

P1299(29/90)* Kozyarin IP.
A hygienic evaluation of certain moisture and carbon dioxide absorbers recommended for cleaning the air of pressurized environments
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina
24(3): 43-45; 1990.
[12 references; none in English]

Hygienic Evaluation, Microbiology
Moisture and Carbone Dioxide Absorbers, Zeolite, Silica Gel
Life Support Systems, Air Cleaning, Pressurized Environments

P1304(29/90)* Adamovich BA, Ratner GS.
A methodology for evaluating and selecting a life support system during the early stages of design.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina
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[9 references; 1 in English]

Life Support Systems, Regenerative, Evaluation, Selection
Theoretical Article
Mathematical Modeling

P1322(29/90)**Ivanova IYe, Derednyayeva TA, Alekhina TP, Shaydarov Yul.
The higher plant component in man-rated biological (bioregenerative) life support system.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(4): 40-43; 1990.
[18 references; none in English]

Functional Characteristics
Botany, Higher Plants, Wheat, Peas, Carrots, Beets, Cabbage
Life Support System, Bioregenerative, CELSS, Higher Plants-Man-Mineralization

P1347(29/90) Ivanov IYe, Derendyayeva TA, Mashinskiy AL, Nechitaylo GS.
The effect of space flight on the sowing and productive properties of seeds.
In: Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Page 307-9 .

Developmental Biology, Plant Development, Genetics, Mutations
Botany, Plants, Seeds, Lettuce, Dill, Radish, Garden Cress
Life Support Systems, Space Flight, Long-Term, Mir, Radiobiology

P1299(29/90)* Kozyarin IP.
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Moisture and Carbone Dioxide Absorbers, Zeolite, Silica Gel
Life Support Systems, Air Cleaning, Pressurized Environments

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Mathematical Modeling

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24(4): 40-43; 1990.
[18 references; none in English]

Functional Characteristics
Botany, Higher Plants, Wheat, Peas, Carrots, Beets, Cabbage
Life Support System, Bioregenerative, CELSS, Higher Plants-Man-Mineralization

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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
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Developmental Biology, Plant Development, Genetics, Mutations
Botany, Plants, Seeds, Lettuce, Dill, Radish, Garden Cress
Life Support Systems, Space Flight, Long-Term, Mir, Radiobiology

MATHEMATICAL MODELING

ISSUE 28

PAPERS:

P1258(28/90) Smirnova OA.
Dynamics of critical systems and radiation death of mammals (Mathematical modeling).
In I Vsesoyuznyy Radiobiologicheskiy S"yezd; I Всесоюзный Радиобиологический Съезд (I All-Union Radiobiology Congress) Moscow 21-27 August, 1989. Paper Abstracts. Volume IV Pushchino: USSR Academy of Sciences; 1989.
Pages: 922-923.
Authors' affiliation: Institute of Biomedical Problems, USSR Ministry of Health

Radiobiology, Radiation Death, Hematology, Hemopoiesis; Gastrointestinal System, Intestinal Follicles
Mammals
Mathematical Modeling

P1272(28/90)** Grigoryan SS, Simonov LG, Tsaturyan AK.
A mathematical model of intracranial blood and cerebrospinal fluid circulation system as applied to the study of the effects of extreme conditions.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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[27 references; 14 in English]

Cardiovascular and Respiratory Systems, Circulation, Blood, Neurophysiology, Body Fluids, Cerebrospinal Fluid
Mathematical Modeling, Humans
Extreme Conditions, Tilt Tests, Provocative Tests

ISSUE 29:

PAPER:

P1298(29/90)*Kondrachuk AV, Sirenko SP.
A model of the caloric response of the semicircular canal.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3): 40-43; 1990.
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Neurophysiology, Semicircular Canal
Mathematical Modeling
Caloric Response, Space Conditions

ISSUE 26

PAPERS:

P1178(26/90)* Zaytsev LB, Larina ON, Popova IA.
Serum proteins and products of nitrogen metabolism in humans undergoing long-term hypokinesia.
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23(5) 50-53; 1989.
[7 references; 6 in English]

Metabolism, Nitrogen; Serum Proteins
Humans
Hypokinesia With Head-down Tilt, Long-Term; Countermeasures; Drugs; Physical Exercise

P1195(26/90) Kuznetsov VI, Sarayev YuV, Chirkin AA.
Activation of glycolysis, decreased glycogen reserves and lack of glucocorticoid control of enzymes of carbohydrate metabolism in the liver of rats undergoing long-term hypokinetic stress.
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[13 references; 3 in English]
Authors' Affiliations: Department of Biochemistry, Vitebsk Medical Institute.

Metabolism, Carbohydrate; Glycolysis; Enzymology
Rats, Males
Hypokinesia, Long-Term; Immobilization Stress

ISSUE 27

PAPERS:

P1209(27/90)* Tarasov YuA, Ostovskiy YuM, Satanovskaya VI, Liopo Av, Velichko MG, Abakumov GZ.
Endogenous ethanol in the blood and tissues of rats exposed to hypobaric hypoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 47-51; 1990.
[29 references; 11 in English]

Metabolism, Endogenous Ethanol
Rats
Hypoxia, Hypobaric

P1217(27/90)* Tolkacheva NV, Levachev MM, Kobozev GV, Safronova LG, Sorokina AG.
Use of the method of thin layer chromatography to study lipid ligands in the serum albumin of athletes.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 85-88; 1989.
[23 references; 2 in English]

Metabolism, Lipid Peroxidation, Serum Ligands
Humans, Athletes
Exercise

P1218(27/90)* Potapov PP.
Activity of NADP-dependent cytoplasmic dehydrogenases in the liver and adipose tissue of rats during recovery after hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 89-90; 1989.
[11 references; none in English]

Metabolism, Cytoplasmic Dehydrogenases, Liver, Fat
Rats
Hypokinesia, Recovery

ISSUE 29:
PAPERS:

P1301(29/90)*Gorozhanin VS, Lobkov VV.
Hormonal and metabolic reactions of the human body to long-term fasting.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3): 47-50; 1990.
[18 references; 3 in English]

Metabolism, Endocrinology
Humans, Males
Nutrition, Fasting, Long-Term

P1305(29/90)* Klimovich VV, Lukashik NK.
Parameters of thiamine metabolism in tissues of rats exposed to hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(3): 58-59; 1990.
[17 references; 7 in English]

Metabolism, Thiamin
Rats, Males
Hypokinesia, Immobilization Cages

MICROBIOLOGY

ISSUE 26

MONOGRAPH:

M152 (26/90)Parfenov GP.
Невесомость и Элементарные Биологические Процессы; Nevesomost' i Elementarnyye Biologicheskiye Biologicheskiye Protsessy, ***[Weightlessness and Elementary Biological Processes;.***
Volume 57 In series: Problemy Kosmicheskoy Biologii,
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[272 pages; 46 Tables; 26 Figures; 631 references]

KEY WORDS: Microbiology, Precellular Organisms, One-Celled Organisms, Botany, Plant and Animal Cells, Cytology, Histology, Tissue Cultures; Space Flight, Radiobiology, Ionizing Radiation

ISSUE 26

PAPERS:

P1176(26/90)* Oganov VS, Rakhmanov AS, Ternovoy SK, Novikov VYe, Dubonos SL.
Mineral density of skeletal bones in humans exposed to simulated microgravity.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 43-46: 1989.
[21 references; 11 in English]

Musculoskeletal System, Skeletal Bones, Mineral Density
Humans
Hypokinesia With Head-Down Tilt; Countermeasures; Physical Exercise

P1196(26/9) Volozhin AI, Amelkina.GV.
Changes in the periodontium in long-term hypodynamia and the use of diphosphonates and silatran to prevent these changes.
Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya.
1989(3): 72-75.
[12 references; 1 in English].
Authors' Affiliation: N.A. Semashko Moscow Medical Stomatological Institute

Musculoskeletal System, Periodontium
Rats, Males
Tail Suspension; Prophylactic Countermeasures; Silicon; Diphosphonates

MONOGRAPH:

M157(26/90) Stupakov GP, Volozhin AI.
Kostnaya Sistema i Nevesomost'; Kostnaq Sistema i Nevesomost;
[The Skeletal System and Weightlessness].
Volume 63 In series: Problemy Kosmicheskoy Biologii,
Leningrad: Nauka; 1989.
[184 pages; 27 Tables; 44 Figures; 317 References; 201 in English]

Musculoskeletal System, Skeletal System
Humans, Cosmonauts; Rats, Tortoises
Space Flight, Long-Term

ISSUE 27

PAPERS:

P1206(27/90)* Belakovskiy MS, Khaidakov MS.
Effects of active metabolites of Vitamin D_3 on the bones of rats exposed to different hypokinesia paradigms.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 36-39; 1989.
[18 references; 11 in English]

Musculoskeletal System, Bones; Metabolism, Calcium, Phosphorus
Rats, Male
Nutrition, Vitamin D_3 Metabolites, Hypokinesia, Tail Suspension, Immobilization Cages

P1207(27/90)* Shvets VN, Pankova AS, Gol'dovskaya MD. Vnukova ZE.
Changes induced by hydroxydimethyl aminopropylidene diphosphonate in the response of bone tissue in rats to hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 39-42; 1989.
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Musculoskeletal System, Bone Tissue; Metabolism, Calcium
Rats, Male
Hypokinesia, Immobilization Cages, Hydroxymethyl Aminopropylidene Diphosphonate

P1222(27/90) Stupakov GP, Volozhin AI.
Changes in human bone under conditions of bedrest and weightlessness: The human skeleton under conditions of bedrest and weightlessness.
136 - 147
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Kostnaya Sistema i Nevesomost'; Костная Система и Невесомость
[The Skeletal System and Weightlessness].
Volume 63 In series: Problemy Kosmicheskoy Biologii,
Leningrad: Nauka; 1989.

Musculoskeletal System, Bone; Mechanical Properties; Bone Minerals
Humans, Cosmonauts, Patients, Osteoporosis
Space Flight, Salyut-6, Bedrest

P1223(27/90) Stupakov GP, Volozhin AI.
Changes in human bone under conditions of bedrest and weightlessness: Bone changes when functional loading of the skeleton is reduced from the standpoint of rapid and slow-developing osteoporosis.
147-150.
In: M157(26/90) Stupakov GP, Volozhin AI.
Kostnaya Sistema i Nevesomost'; Костная Система и Невесомость
[The Skeletal System and Weightlessness].
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Musculoskeletal System, Bone
Humans
Reduced Functional Loading, Osteoporosis, Rapid and SlowDeveloping

P1224(27/90) Stupakov GP, Volozhin AI.
Changes in human bone under conditions of bedrest and weightlessness: General principles of bone changes under conditions of weightlessness and its simulations.
150- 158.
In: M157(26/90) Stupakov GP, Volozhin AI.
Kostnaya Sistema i Nevesomost'; Костная Система и Невесомость
[The Skeletal System and Weightlessness].
Volume 63 In series: Problemy Kosmicheskoy Biologii,
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Musculoskeletal System, Bone; Metabolism, Metabolic Rate, Calcium
Humans, Rats, Dogs
Weightlessness, Simulated Weightlessnsess

ISSUE 28

PAPERS:

P1273(28/90)** Tatarinov AM, Dubonos SL, Yanson KhA, Oganov VS, Dzenis VV, Rakhmanov AS.
Ultrasound diagnosis of the status of the tibia in humans undergoing a 370-day period of head-down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2): 29-31.
[15 references; 6 in English]

Musculoskeletal System, Tibia Bone, Ultrasound
Humans
Hypokinesia With Head-Down Tilt, 370-Day, Prophylactic Countermeasures, Exercise

P1274(28/90)** Morukov VB, Orlov OI, Belakovskiy MS. Kazeykin VS, Zaychik VYe, Shvets VN, Tumanova IYu.
The effect of simulated weightlessness on calcium metabolism and state of bone tissue in experimental animals.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2): 31-34.
[25 references; 13 in English]

Musculoskeletal System, Bone; Metabolism, Calcium; Endocrinology
Rats, Male
Hypokinesia, Immobilization Cages; Hypodynamia, Tail Suspension

P1286(28/90) Stupakov GP, Volozhin.
The skeletal system of experimental animals under conditions of weightlessness: The effects of space flight on the weight-bearing bones of rats: Restructuring of bone tissue.
In: M157(26/90) Stupakov GP, Volozhin AI.
Kostnaya Sistema i Nevesomost'; Костная Система и Невесомость
[The Skeletal System and Weightlessness].
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Pages: 49-61.

Musculoskeletal System, Weight-Bearing Bones, Femur, Tibia, Brachium
Rats
Space Flight, COSMOS-615, -782, -936, 1129

P1287(28/90) Stupakov GP, Volozhin.
The skeletal system of experimental animals under conditions of weightlessness: The effects of space flight on the weight-bearing skeleton of rats: State of organic and mineral components.
In: M157(26/90) Stupakov GP, Volozhin AI.
Kostnaya Sistema i Nevesomost'; Костная Система и Невесомость
[The Skeletal System and Weightlessness].
Volume 63 In series: Problemy Kosmicheskoy Biologii,
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Pages: 61-65.

Musculoskeletal System, Weight-Bearing Bones, Vertebrae, Femur, Organic and Mineral Components
Rats
Space Flight, COSMOS-936, -1129

P1288(28/90) Stupakov GP, Volozhin.
The skeletal system of experimental animals under conditions of weightlessness: The effects of space flight on the weight-bearing bones of rats: Mechanical properties of bone tissue.
In: M157(26/90) Stupakov GP, Volozhin AI.
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Pages: 65-76.

Musculoskeletal System, Weight-Bearing Bones, Femur, Tibia, Humerus; Mechanical Properties
Rats
Space Flight, COSMOS-615, -782, -936, -1129

P1289(28/90) Stupakov GP, Volozhin.
The skeletal system of experimental animals under conditions of weightlessness: The effects of space flight on the weight-bearing bones of rats: Artificial gravity as a means to prevent bone changes in microgravity.
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[***The Skeletal System and Weightlessness***].
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Pages: 76-79.

Musculoskeletal System, Weight-Bearing Bones, Tibia
Rats
Space Flight, COSMOS-936; Artificial Gravity

P1290(28/90) Stupakov GP, Volozhin.
The skeletal system of experimental animals under conditions of weightlessness: The effects of space flight on non-weight-bearing bones of rats.
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Kostnaya Sistema i Nevesomost'; Костная Система и Невесомость
[***The Skeletal System and Weightlessness***].
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Pages: 79-82.

Musculoskeletal System, Non-weight-bearing Bones, Ribs, Jaw, Teeth
Rats
Space Flight, COSMOS-936, -1129

ISSUE 29:

PAPERS:

P1291(29/90) Stupakov GP, Volozhin AI.
The bone system of experimental animals under conditions of weightlessness: The effect of space flight on the skeleton of tortoises.
In: M157(26/90) Stupakov GP, Volozhin AI.
Kostnaya Sistema i Nevesomost'; Костная Система и Невесомость
[***The Skeletal System and Weightlessness***].
Volume 63 In series: Problemy Kosmicheskoy Biologii,
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Pages: 82-90.

Musculoskeletal System, Bones, Skeleton; Metabolism, Low
Tortoises
Space Flight,Short- and Long-Term, COSMOS-782, -605, -613, Soyuz-20

MUSCULOSKELETAL SYSTEM

P1313(29/90)** Oganov VS, Cann C, Rakhmanov AS, Ternovoy SK
A computer tomographic investigation of the musculoskeletal system of the spine in humans after long-term space flight.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(4): 20-21; 1990.
[11 references; 6 in English]

Musculoskeletal System, Bones, Spine, Computer Tomography, Muscle Density; Mineral Loss
Humans, Cosmonauts
Space Flight, Long-Term, Salyut-7, Hypokinesia with Head-Down Tilt

P1314(29/90)**Il'ina-Kakuyeva Yel.
Morphohistochemical investigation of the skeletal muscles of rats in an experiment on biosatellite COSMOS-1887.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(4): 22-25; 1990.
[21 references; 9 in English]

Musculoskeletal System, Skeletal Muscles, Morphohistochemical Analysis, Fast-Twitch; Slow-Twitch
Rats
Space Flights, COSMOS-1887

NEUROPHYSIOLOGY

ISSUE 26

PAPER:

P1170(26/90) Shlyk GG, Rotenberg MA, Shirvinskaya MA, Korol'kov VI, Magedov VS.
Characteristics of nocturnal sleep in monkeys on the ground and during space flight on COSMOS-1667.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 12-17: 1989.
[12 references; 9 in English]

Neurophysiology, Sleep
Monkeys
Space Flight, COSMOS-1667

P1171(26/90) Lychakov DV, Pashchin AN, Boyadzhiyeva-Mikhaylova A, Khristov I. (Latter two are Bulgarian)
A study of the structure of the receptor organs of the vestibular apparatus in rats after flight on COSMOS-1667.
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23(5): 17-26: 1989.
[43 references; 25 in English]

Neurophysiology, Vestibular System; Morphology; Receptor Organs
Rats, Male
Space Flight, COSMOS-1667

P1192(26/90)* Korolev AB.
Study of the pathogenesis of the neurological form of decompression sickness in rabbits.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 92-93;1989.
[9 references; 6 in English]

Neurophysiology, Pathogenesis; Brain
Rabbits
Decompression Sickness

P1198(26/90) Ivanov AV.
Change in reflexive vestibular activity in response to orthostatic loading.
Vestnik Otorinolaringologii.
1989(4): 16-19.
[15 references; none in English]
Author's Affiliation: Belorussian Research Institute on Neurology, Neurosurgery and Physiotherapy, Minsk

Neurophysiology, Vestibular Activity
Humans, Males
Orthostatic Loading, Stand Test, Tilt Test

NEUROPHYSIOLOGY

ISSUE 27

PAPERS:

P1205(27/90)* Karkishchenko NN.
Specification for an "ideal" drug to prevent space motion sickness (space adaptation syndrome.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 33-36; 1989.
[16 references; 3 in English]

Neurophysiology, Space Adaptation Syndrome; Human Performance, Mental Work Capacity
Humans, Patients, Vestibular Tolerance, Diminished
Rotation, Pharmacological Countermeasures

P1214(27/90)* Verbitskaya LB, Fedorenko VS, Kabitsyna RA..
Remote ultrastructural changes in cerebellar cortex of rats after exposure to accelerated carbon ions.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 71-77; 1989.
[2 references; 1 in English]

Neurophysiology, Cerebral Cortex
Rats
Radiobiology, Accelerated Carbon Ions, γ-Radiation; Remote Effects

P1227(27/90) Moskalenko YuYe, Beketov AI, Maksimiuk VF, Skoromnyy NA.
Cerebrovascular effects of motion sickness.
Fiziologicheskiy Zhurnal SSSR im I.M.Sechenova.
75(11): 1560-1567; 1989.
[12 references; 2 in English]
Authors' Affiliations: Institute of Evolutionary Physiology and Biochemistry, Leningrad; Crimean Medical Institute, Simferopol

Neurophysiology, Cerebrovascular Effects; Cardiovascular and Respiratory Systems, Cerebral Circulation
Rabbits
Motion Sickness, Head-Down Tilt

ISSUE 28

PAPERS:

P1240(28/90)*Gitsov LG, Burneva VG, Verbitskaya LB, Kabitsyna RA, Fedorenko VS.
Ultrastructural changes in neurons of the arcuate nucleus-medial eminence complex in rats irradiated with carbon ions and γ-radiation.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 34-36..
[6 references; none in English]

Neurophysiology, Neurons, Arcuate Nucleus, Medial Eminence
Rats, Female
Radiobiology, Carbon Ions, γ-Radiation

NEUROPHYSIOLOGY

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Authors' affiliation: Scientific Research Institute of Military Medicine

Neurophysiology, Brain, Edema, Blood-Brain Barrier
Rats, Males
Radiobiology, γ-Irradiation; High Doses

P1255(28/90) Antipov VV, Fedorov VP, Ushakov IB.
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Authors' affiliation: Institute of Biomedical Problems, USSR Ministry of Health; Voronezh Medical Institute

Neurophysiology, Central Nervous System, Metabolism
Rats, Dogs
Radiobiology, Radiation; Modifiers, Hypoxia, Hyperoxia, Alcohol, Acceleration, Vibration

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Morphological changes in brain neurons in rats irradiated with accelerated charged particles.
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Authors' affiliation: Institute of Biomedical Problems, USSR Ministry of Health; Brain Institute, USSR Academy of Medicine; Institute for the Study of the Brain, Sofia, Bulgaria

Neurophysiology, Brain Neurons
Rats
Radiobiology, Accelerated Charged Particles

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Neurophysiology, Vestibular Function, Orthostatic Tolerance
Humans, Cosmonauts
Space Flight, Long-Term, Salyut-6

P1247(28/90)* Vorob'yev OA, Zaritskaya VV, Krylov YuV.
The relationship between vertical optokinetic nystagmus and susceptibility to motion sickness in humans.
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Neurophysiology, Vertical Optokinetic Nystagmus
Humans, Males, Individual Differences
Motion Sickness

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Cardiovascular and Respiratory Systems, Cardiac Activity, Protective Effects
Rats, Rabbits
Neurophysiology, Parasympathetic Nervous System, Vagus Nerve, Enzymology, Delta-Sleep Peptide, Psychology, Stress, Immobilization Effects

P1303(29/90)* Stolbkov YuK, Maslova YeP.
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Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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Neurophysiology, Nystagmus
Humans, Patients
Otolith Asymmetry

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The role of glucocorticoids in postvibrational shifts of inhibitory mediation in brain structures.
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Neurophysiology, Inhibitory Mediation, Brain Structures
Rats, Male
Endocrinology, Glucocorticoids, Vibration Effects

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P1325(29/90)* Krotov VP, Simonov LG, Trombovetskiy YeV.
Epidural and subdural recording of intracranial pressure in response to postural tests.
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Neurophysiology, Body Fluids, Intracranial Pressure, Equipment and Instrumentation
Rabbits
Postural Tests

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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
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Neurophysiology, Autonomic Homeostasis, Psychology, Stress
Humans, Cosmonauts
Space Flight, Operational Medicine, Equipment and Instrumentation, Cosmonaut Monitoring System

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The effect of weightlessness on eye movement responses.
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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Page 51-52.

Neurophysiology, Eye Movement Response
Humans, Cosmonauts
Space Flight, Salyut-6, -7

NEUROPHYSIOLOGY

P1351(29/90) Karkishchenko NN, Dimitriadi NA.
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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
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Neurophysiology, Space Motion Sickness
Rats, Humans
Pharmacological Countermeasures, Anticonvulsants

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Psychophysiolgical characteristics of people susceptible and resistant to motion sickness.
In: Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Page 262-263.

Neurophysiology, Motion Sickness, Suceptibility
Humans, Males, Individual Differences
Psychology, Psychophysiological Parameters

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Metabolism, Calcium
Rats, Males
Nutrition, Vegetable Protein; Hypokinesia; Tail Suspension

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Thiamin metabolism in rats with a B_1 deficiency exposed to hypokinesia.
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Authors' Affiliation: Grodensk Medical Institute.

Metabolism, Thiamine
Rats, Male
Nutrition, B_1 Deficiency; Hypokinesia; Immobilization Cages

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Survival, Botany, Wild Plants, Biological Effects, Human Performance
Humans, Expedition Members, Males
Nutrition, Deficient Diets

OPERATIONAL MEDICINE

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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
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Neurophysiology, Pharmacological Countermeasures, Nootropic Drugs, GABA, GHBA
Humans, Cosmonauts
Operational Medicine, Space Flight

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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
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Operational Medicine, Crew Composition, Physician
Humans, Cosmonauts
Space Flight, Long-Term, Mars Mission

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KEY WORDS: Perception; Spatial Orientation; Psychology; Aviation Medicine; Human Performance; Humans, Pilots; Pilot Training

PERSONNEL SELECTION

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Authors' Affiliation: USSR Medical Corps

Human Performance, Small Group Performance
Humans, Aviation Personnel, Military
Psychology, Personnel Selection, Compatibility

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Kaluga: 19-21 June 1990.
Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Page 55-57.

Personnel Selection, Cosmonaut Selection, Human Performance, Equipment and Instrumentation
Humans, Cosmonauts, Twin Studies
Operational Medicine, Medical Factors, Neurophysiology, Genetics

P1352(29/90) Ioseliani KK, Narinskaya AL, Tereskhina SA.
On psychological selection of cosmonauts for repeated flights.
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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
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Personnel Selection, Cosmonaut Selection, Space Flight, Repeated Flights, Psychology, Human Performance
Humans, Patients, Age Differences
Hypokinesia With Head-Down Tilt

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MONOGRAPH:

M154(26/90) Berezin FB.
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Affiliation: Institute of Biological Problems of the North; USSR Academy of Sciences; Far Eastern Division

Psychology, Stress; Human Performance
Humans
Adaptation

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[15 references; 3 in English]
Authors' affiliation: N.G. Chernyshevskiy University, Saratov

Psychology, Stress Response
Rats, Males and Females
Gender Differences, Genetics

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Psychology, Emotional Status
Aviation Medicine, Flight Crews
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Adaptation, Extreme Situations, Conditioned Responses, Recovery
Primates, Rhesus Monkeys
Psychology, Typology, Behavior

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Psychology, Neuroses, Psychosomatic Illness
Humans, Flight Crews
Aviation Medicine, Risk Factors

P1306(29/90)* Terelyak Ya, Kobos Z (Poland).
Psychological determinants of time to complete flight training.
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Aviation Medicine, Flight Training, Human Performance
Humans, Flight Personnel
Psychology, Test Scores

P1341(29/9) Zaprisa NS.
Dynamics of parameters of communicative activity in the system for psychological analysis of cosmonaut functional status.
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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
Page 232.

Human Performance, Functional State
Humans, Cosmonauts
Psychology, Psychodiagnosis, Speech Analysis

PSYCHOLOGY

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Affiliation: Scientific Council on Space Biology and Physiology, USSR Academy of Sciences; Institute of Biomedical Problems, USSR Ministry of Health
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Psychology, Psychophysiological State, Human Performance
Humans, Males
Hypokinesia With Head-Down Tilt, Long-Term, 370-Day

P1344(29/90) Myasnikov VI, Polyakov VV, Zhukova OP, Ponomareva II,[USSR], Momand AA [Afghanistan], Aleksandrova AA, Stoilova I [Bulgaria].
The study of cosmonauts' sleep in flight on space station Mir.
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Psychology, Neurophysiology, Sleep Patterns, Adaptation
Humans, Cosmonauts
Space Flight, Mir

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Hematology, Erythrocytes, Acid Tolerance
Rats, Male
Radiobiology, Magnetic Field, Induction Increase Rate

P1199(26/90) Tabukashvili RI, Ushakov IB.
Certain biochemical mechanisms underlying the combined effects of extreme factors.
Voprosy Meditsinskoy Khimii.
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[15 references; 1 in English]
Authors' Affiliation: Tblisi Medical Institute

Radiobiology, Ionizing Radiation, Liver
Rats, Males
Hypoxia, Microwave Radiation, Radioprotective Effects

P1201(26/90)Tabukashvili RI, Ushakov IB.
Possible mechanisms of the radiomodifying effect of exogenous hypoxia on microwave radiation.
Radiologiya.29(4): 529-532; 1989.
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Authors affiliation: Tblisi Medical Institute.

Radiobiology, Ionizing Radiation, Liver
Rats, Males
Hypoxia, Microwave Radiation, Radioprotective Effects

MONOGRAPH:

M153(26/90) Antipov VV (Editor)
Biofizicheskiye Osnovy Deystviya Kosmicheskoy Radiatsii i Izlucheniy Uskoriteley;
Биофизические Основы Действия Космической Радиации и Излучений Ускорителей
[The Biophysical Bases for the Effects of Cosmic Radiation and Radiation from Accelerators.]
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KEY WORDS: Radiobiology; Cosmic Radiation, Accelerators; Biophysics; Biological Effects; Hadrons

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Author's Affiliation: Institute for Biomedical Problems, Moscow

Hematology, Hemopoiesis, Perodicity
Rats
Radiobiology, γ-Irradiation, Continuous

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P1266(28/90) Vorozhtsova SV, Gerasimenko VN.
Cytogenetic damage to mammalian cells after exposure to charged particles with relativistic energy.
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Authors' Affiliation: Institute of Biomedical Problems, USSR Ministry of Health.

Genetics, Cytogenetic Damage, Corneal Epithelium, Lymphocytes
Mice, Humans
Radiobiology, Charged Particles, Relativistic Energy

P1261(28/90) Benevodenskiy VN, Kuznetsova IV.
Methodological approach to determining the biological effects of heavy ions of galactic cosmic radiation.
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Authors' Affiliation: Institute of Biomedical Problems, USSR Ministry of Health

Radiobiology, Biological Effects
Microbiology, Yeast Cells
Heavy Ions, Galactic Cosmic Radiation; Space Flight, COSMOS

P1262(28/90) Kabachenko AN, Fedorenko BS, Portman AI.
Cataractogenic effectiveness of accelerated charged particles of high energy.
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Authors' Affiliation: Institute of Biomedical Problems, USSR Ministry of Health

Radiobiology, Cataractogenesis
Mice
Accelerated Charged Particles, High Energy

P1263(28/90) Fedorenko BS.
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Authors' Affiliation: Institute of Biomedical Problems, USSR Ministry of Health

Radiobiology, Carcinogenesis
Rats, Females
Charged Particles, High Energy

P1264(28/9) Vladimirov VG, Krasil'nikov II.
Radioprotectors and the theory of the radioprotective effect.
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Authors' affiliation: S.M. Korov Academy of Military Medicine

Radiobiology, Radioprotective Effect
Theoretical Article
Radioprotectors

P1265(28/9) Morozova IN. Lukashin BP.
Prospects for using immunomodulators as a means in increase nonspecific resistance in radiation pathology.
In I Vsesoyuznyy Radiobiologciheskiy S"yezd; I Всесоюзный Радиобиологический Съезд (I All-Union Radiobiology Congress) Moscow 21-27 August, 1989. Paper Abstracts. Volume III
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Authors' affiliation: S.M. Korov Academy of Military Medicine

Radiobiology, Nonspecific Resistance, γ-Irradiation
Mice, Rats
Immunology, Immunomodulators, Alanine

P1250(28/90)* Yablontsev NN.
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Radiobiology, Radiation Safety Standards
Humans, Cosmonauts
Space Flights, Long-Term

P1284(28/90)** Minkova M, Pantev B (Bulgaria)
The effects of combined physical and chemical radiation protection under conditions of simulated hypergravity.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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Radiobiology, Radioprotectors, Physical/Chemical
Rats
Acceleration

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The effects of low-frequency electromagnetic fields on physiological systems.
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Neurophysiology, Endocrinology, Regulatory Systems, Hematology
Review Article
Radiobiology, Electromagnetic Fields, Low Frequency

P1319(29/90)** Katasonov SN, Shishkina SK, Maltseva IO, Ryabova TYa.
Study of changes in the electrical parameters of the skin of irradiated rats.
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Skin, Electrical Parameters, Prognostic Indicator
Rats
Radiobiology, γ-Irradiation

RADIOBIOLOGY

P1320(29/90)** Lobacheva GV.
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Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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Neurophysiology, Audiogenic Seizures
Rats, Females
Radiobiology, Ultraviolet-Irradiation, Eyes

P(29/90)** Malakhovskiy VN, Stemparzhetskiy OA, Bokk MI.
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Musculoskeletal System, Neurophysiology, Balance
Dogs
Radiobiology, γ-Irradiation

P1327(29/90)** Bugrov SA, Davydov BI, Tikhonchuk VS, Soldatov SK, Osokina TF.
The protective action of mexamine in microwave irradiation of rats.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(4): 55-56; 1990.
[10 references; 5 in English]

Biological Effects, Survival
Rats, Female
Radiobiology, Microwave Irradiation, Radioprotectors, Mexamine, Serotonin

REPRODUCTIVE SYSTEM

ISSUE 28

PAPER:

P1237(28/90)* Kokoreva LV, Chuvpilo TA, Pustynnikova AM.
The effect of a high intensity magnetic field on the reproductive function of male rats.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(1): 28-30;1990.
[8 references; 1 in English]

Reproductive System, Reproductive Function (Male), Developmental Biology
Rats, Male
Radiobiology, Magnetic Field, High Intensity

ISSUE 29:

PAPER:

P1326(29/90)**Serova LV, Apanasenko ZI, Ivanovna SYa, Chelnaya NA.
The effect of hypergravity on mammals during the period of delivery and birth of offspring.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(4): 54-55; 1990.
[3 references; 2 in English]

Reproductive System, Delivery, Lactation, Developmental Biology, Psychology, Maternal Behavior
Rats, Female, Pregnant, Neonates
Hypergravity, Centrifugation

ISSUE 26

PAPERS:

P1172(26/90)* Alpatov AM, Il'in YeA, Antipov VV, Tairbekov MG.
Biological experiments on COSMOS-1887.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 26-32; 1988.
[21 references; 11 in English]

Space Biology and Medicine, Biological Experiments; Metabolism, Cell; Genetics; Biological Rhythms; Developmental Biology; Cytology; Population Studies
Microbiology, *E. coli, Tetrahymena pyriformis, Wolffia, Haplopappus*, Guppies, Tritons, *Drosophila melanogaster;* Beetles, *Macaca mulatta,* Stick Insects
Space Flight, COSMOS-1887; Radiobiology, Cosmic Radiation; Adaptation

P1177(26/90) Grigor'yev AI, Morukov BV.
370-Day antiorthostatic hypokinesia: Goals and research protocol
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 47-50; 1989.
[9 references; none in English]

Space Biology and Medicine; Cardiovascular and Respiratory Systems; Cardiovascular Deconditioning; Body Fluids; Musculoskeletal System; Metabolism; Gastrointestinal System; Hematology; Immunology
Humans, Males
Hypokinesia with Head-Down Tilt, Long-Term; Prophylactic Countermeasures, Physical Exercise; Drugs; LBNP; Karkas Suit; Adaptation

P1194 (26/90)Kovalenko YeA, Kasyan II
On the Pathogenesis of Weightlessness
Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya
89(3): 9-18. Received by journal 6/6/88

Space Biology and Medicine; Neurophysiology, Space Motion Sickness; Body Fluids; Cardiovascular and Respiratory Systems; Endocrinology; Musculoskeletal System; Enzymology; Metabolism, Bioenergetics
Humans, Cosmonauts, Rats
Weightlessness, Pathogenesis; Deconditioning; Adaptation; Space Flight, Long-Term; Salyut, Soyuz, Weightlessness Simulations, COSMOS; Prophylactic Countermeasures; Physical Exercise, LBNP

CONFERENCE REVIEW

CR12(26/90)* Drozd YuV.
Report on: Twenty-first Symposium on Space Biology and Medicine (Baranov-Sandomerski, June 1988)
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(5): 93-96; 1989.

KEY WORDS: Space Biology and Medicine; Human Performance; Radiobiology; Equipment and Instrumentation; Operational Medicine; Musculoskeletal System; Weightlessness; Acceleration; Prophylactic Countermeasures; Hypodynamia; Hypokinesia; Psychology, Stress; Space Flight; COSMOS-1887; Nutrition; Metabolism; Life Support Systems, CELSS; Neurophysiology, Motion Sickness; Sleep; Immunology

ISSUE 27

CONFERENCE REVIEW:

CR13(27/90)* Gyurdzhian AA, Zorile VI.
The work of the section on Aviation and Space Medicine of the Moscow Physiological Society.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(6): 91-92; 1989.

KEY WORDS: Space Medicine; Aviation Medicine

SPECIAL FEATURE:

Essay by N. Gurovskiy; **In the Interests of Public Health**
In: Aviatsiya i Kosmonavtika; 11/89

KEY WORDS: Space Medicine, Operational Medicine, Public Health, Equipment and Instrumentation, Personnel Selection, Hematology, Biological Rhythms

ISSUE 28:

PAPER:

P1267(28/90)** Gazenko OG, Grigor'yev AI, Yegorov AD.
Medical investigations of long-term manned space flight on-board Salyut-7-Soyuz-T.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
24(2): 9-15; 1990.
[11 references; 13 in English]

Space Biology and Medicine, Operational Medicine, Cardiovascular and Respiratory System, Body Fluids, Musculoskeletal System, Motor Coordination, Bones, Muscle Mass, Neurophysiology, Vestibular System, Sensory Systems, Endocrinology, Nutrition, Human Performance
Humans, Cosmonauts
Space Flight, Salyut-7, Long-Term, EVAs, Prophylactic Countermeasures, Exercise, LBNP

ISSUE 29:

PAPER:

P1310(29/90)** Gazenko OG, Grigor'yev AI, Bugrov SA, Yegorov VV, Bogomolov VV, Kozlovskaya IB, Tarasov IK.
Review of the major results of medical research during the flight of the second prime crew of the Mir Space Station.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
23(4): 3-11; 1990.
[16 references; none in English]

Space Biology and Medicine, Operational Medicine, Habitability and Environmental Effects, Microclimate, Atmosphere, Microbiology, Cardiovascular and Respiratory Systems, Musculoskeletal System, Neurophysiology, Motor Effects, Nutrition, Metabolism, Endocrinology, Body Fluids, Adaptation, Radiobiology, Hematology, Immunology, Psychology
Humans, Cosmonauts
Space Flight, Long-Term, Mir, Second Prime Crew, Prophylactic Countermeasures

MONOGRAPH:

M164(29/90) Flom TV (editor)
Trudy XXIII Chteniy Posvyashchennykh Razrabotke Nauchnogo Naslediya i Razvitiyu Idey K.E. Tsiolkovskogo: Sektsiya "Problemy Kosmicheskoy Meditsiny i Biologii" Mediko-Biologicheskiye Problemy Obespecheniya Kosmicheskikh Poletov v Svete Idey K.E. Tsiolkosvskogo
Труды XXIII Чтений Посвященных Разработке Научного Наследия и Развитию Идей К.Э. Циолковского: Секция «Проблемы Космической Медицины и Биологии» Медико-Биологические Проблемы Обеспечения Космических Полетов в Свете Идеы К.Э. Циолкосвского
Proceedings of the XXIII Lecture Series Devoted to Developing the Scientific Ideas of K.E.Tsiolkovskiy: Section on "Problems of Space Medicine and Biology. Biomedical Problems in the Support of Space Flight in Light of the Ideas of K.E. Tsiolkovskiy".
Kaluga 13-16,Septembers 1988.
USSR Academy of Sciences: 1989: 98 pages.
Affiliation: Commission on Development of the Scientific Heritage of K.E. Tsiolkovskiy, USSR Academy of Sciences; K.E. Tsiolkovskiy State Museum on the History of Cosmonautics

KEY WORDS: Space Biology and Medicine, Biological Rhythms, Exobiology, Man-Machine Systems, Human Performance, Group Dynamics, Immunology, Aviation Medicine, Psychology, Biomechanics, Space Suits, Ground Simulations, Botany, Plant Gravity Response, Plant Development, Thermal Homeostasis, Perception, Time, Visual, Lunar Soil

SPACE MEDICINE

CONFERENCE REPORT:

CR15(29/90) Program of the: ***Ninth All-Union Conference on Space Biology and Medicine, Kaluga 18-21 July, 1990***

KEY WORDS: Space Biology and Medicine, Space Flight, Long-Term, Mir, Aviation Medicine, COSMOS-1887,-2044, Operational Medicine, Pharmacological Countermeasures, Acceleration Tolerance, Gastrointestinal System, Immunity, Adaptation, Oxygen Homeostasis, LBNP, Hypokinesia With Head-Down Tilt, Thermal Regulation, Orthostatic Tolerance, Cardiovascular and Respiratory Systems, Hypoxia, Neurophysiology, Amino Acids, Biological Rhythms, Endocrinology, Metabolism, Musculoskeletal System, Bone, Muscle, Hematology, Lipid Peroxidation, Cosmonaut Training, Psychology Human Performance, Equipment and Instrumentation, Developmental Biology, Radiobiology, Habitability and Environmental Effects, Life Support Systems, Microbiology, Mathematical Modeling, Reproductive System

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15. Supplementary Notes

16. Abstract

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